

Title (en)

HEAT EXCHANGER AND AIR CONDITIONER HAVING THE SAME

Title (de)

WÄRMETAUSCHER UND KLIMAANLAGE DAMIT

Title (fr)

ÉCHANGEUR DE CHALEUR ET CLIMATISEUR DOTÉ D'UN ÉCHANGEUR DE CHALEUR

Publication

EP 3850292 A1 20210721 (EN)

Application

EP 19874628 A 20191017

Priority

- JP 2018196701 A 20181018
- KR 20190115907 A 20190920
- KR 2019013691 W 20191017

Abstract (en)

[origin: JP2020063883A] To improve heat transfer performance of a heat exchanger by making an air flow to a flat portion easier than employing a configuration of a flat portion of a fin around a heat transfer tube where an axis in a direction substantially perpendicular to an air flow direction has a longer shape than an axis in the air flow direction.SOLUTION: A heat exchanger comprises: a heat transfer tube in which a refrigerant flows; and a plurality of fins provided substantially perpendicular to the heat transfer tube. Each of the fins comprises: a corrugated portion with a corrugation in a direction along the heat transfer tube around the heat transfer tube; and a flat portion formed substantially perpendicular to the heat transfer tube between the heat transfer tube and the corrugated portion, where a first axis in an air flow direction has a longer shape than a second axis, which is in a direction substantially perpendicular to the air flow direction.SELECTED DRAWING: Figure 3

IPC 8 full level

F28F 1/12 (2006.01); **F24F 13/30** (2006.01); **F28D 1/053** (2006.01)

CPC (source: EP KR US)

B21D 53/085 (2013.01 - EP); **F24F 13/30** (2013.01 - KR); **F28D 1/04** (2013.01 - EP); **F28D 1/053** (2013.01 - KR); **F28F 1/128** (2013.01 - KR US);
F28F 1/32 (2013.01 - EP); **F28D 2021/0068** (2013.01 - EP); **F28F 1/325** (2013.01 - EP); **F28F 2215/04** (2013.01 - KR);
F28F 2215/08 (2013.01 - KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

CN 112888909 A 20210601; CN 112888909 B 20230228; EP 3850292 A1 20210721; EP 3850292 A4 20211110; EP 3850292 B1 20240522;
JP 2020063883 A 20200423; KR 20200043897 A 20200428; US 11293701 B2 20220405; US 2020132395 A1 20200430

DOCDB simple family (application)

CN 201980068549 A 20191017; EP 19874628 A 20191017; JP 2018196701 A 20181018; KR 20190115907 A 20190920;
US 201916657703 A 20191018